Panel: Assessment of Great Salt Lake Wetlands

Terry Johnson (Utah DOT)

UDOT's Wetland Functional Assessment Method was adopted as a referenced-based approach to aid in the evaluation of wetland plant community and habitat functions. Assessment information is used to determine project mitigation needs.

Brian Nicholson (SWCA Environmental Consultants)

SWCA wetland experts conduct wetland assessments to support regulatory decisions as well as to inform strategic planning efforts, including the development of Special Area Management Plans.

Heidi Hoven (The Institute for Watershed Sciences)

Dr. Heidi Hoven lead a wetland assessment for the Salt Lake County Shoreland SAMP. She has developed a model that evaluates wildlife habitat related to wetlands within the same plan area. She has also been collaborating with UT DEQ to assess wetland condition in Farmington Bay and around Great Salt Lake.

Mike Sipos (Bio-West, Inc.)

Bio-West wetland experts are working in collaboration with Utah DOT to develop a habitat quality index for use in wetland assessment. The index is being tested for possible use in wetland mitigation and restoration planning.

Structure of UT DOT Wetland Functional Assessment Method "Roll-Up" of Metrics and Categorization

Terry Johnson

Functional Assessment Rating

Function Variables	General Evaluation	Actual Functional Points/Rating	Possible Functional Points	Functional Units: (Actual Points x Estimated AA Acreage)
15b. Plant Community Composition			1	
15c. Listed/Proposed T&E Species Habitat			.9	
15d. UT Natural Heritage Program Species Habitat			.9	
15e. General Wildlife Habitat			1	
15f. General Fish/Aquatic Habitat			1	
15g. General Amphibian Habitat			0	
15h. Flood Attenuation			1	
15i. Short and Long Term Surface Water Storage			1	
15j. Sediment/Nutrient/Toxicant Removal			1	
15k. Sediment/Shoreline Stabilization			1	
Totals:				

If functional variables other than those toned are not applicable (NA) to the AA of concern, enter NA in the possible functional points box and subtract the possible functional points for that variable when calculating percent of total functional points.
Note: % total functional points = actual functional points ÷ possible functional points.

	% total functional points

Overall Assessment Area Category

Circle appropriate category based on the criteria outlined below. **I II III IV**

Red Flag Category
___ Documented habitat for a federally listed or proposed threatened or endangered plant or animal species was found. (Yes response to question 12)
___ Documented habitat for a species rated S1 by the Utah Natural Heritage Program. (Yes response to question 12)
Wetlands in this category are a special case and require consultation with the COE, USFWS, and UDWR throughout the entire application process.

Category I Wetland: (Must satisfy one of the following criteria; if it does not meet criteria, go to Category II)
___ Score of .9 functional point for Species Rated primary documented S2 by the Utah Natural Heritage Program **or** .8 for primary suspected S2 species, level of disturbance is also rated low; **or**
___Score of 1 functional point for Flood Attenuation (riverine only) and answer to Question 15i. ii is "yes"; **or**
___Score 1 function point for Plant Community Composition; **or**
___Total actual functional points > 80% (round to nearest whole #) of total possible functional points.

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; if not satisfied, go to Category IV)
___Score of .9 functional point for Species Rated primary documented S3 by the Utah Natural Heritage Program, **or** .8 functional point for Species Rated primary suspected S3 species; level of disturbance is rated low **or**
___Score of ≥.9 functional point for General Wildlife Habitat; **or**
___Score of ≥.9 functional point for General Fish/Aquatic Habitat (riverine and lacustrine only); **or**
___Score of >.7 ≤.8 functional point for Plant Community Composition
___Total Actual Functional Points > 65% (round to nearest whole #) of total possible functional points.

Category III Wetland: (Criteria for Categories I, II or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; if it does not satisfy criteria, place wetland in Category III)
___Total actual functional points < 30% (round to nearest whole #) of total possible functional points
___Roadside Ditch Wetland Classification

Structure of UT DOT Wetland Functional Assessment Method Scoring of Metrics

Terry Johnson

15b. Plant Community Composition

This field assesses the plant community within the AA. Source: Keate (2004) and Padgette et al. (1989).

Refer to Appendix E for photographs, plan views, cross sectional diagrams, the range of expected coverage and wetland specific vegetation lists. Refer to Appendix F for transect protocol (step point). Draw a simple boundary of the AA and illustrate all plant transect locations and approximate distances on page 11 of this form. See glossary for definition of native wetland plants.

i. Do you find all layers of vegetation that are expected for this wetland type? Circle: Y N

ii. What is the percent ground cover (within the AA) dominated by native wetland vegetation?

High ≥ 80%, Moderate 79-60%, Low < 60%

iii. What is the percent of native wetland plants to non-native or non-wetland plants observed using the transect protocol?

High ≥ 80%, Moderate 79-60%, Low < 60%

iv. Rating for riverine and lacustrine wetlands.

Layers (i)	Y									N								
Cover (ii)	H			M			L			H			M			L		
Native Wetland Species (iii)	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Rating	1H	.9H	.8H	.7M	.6M	.5M	.4M	.3L	.2L	.9H	.8H	.7M	.6M	.5M	.4M	.3L	.2L	.1L

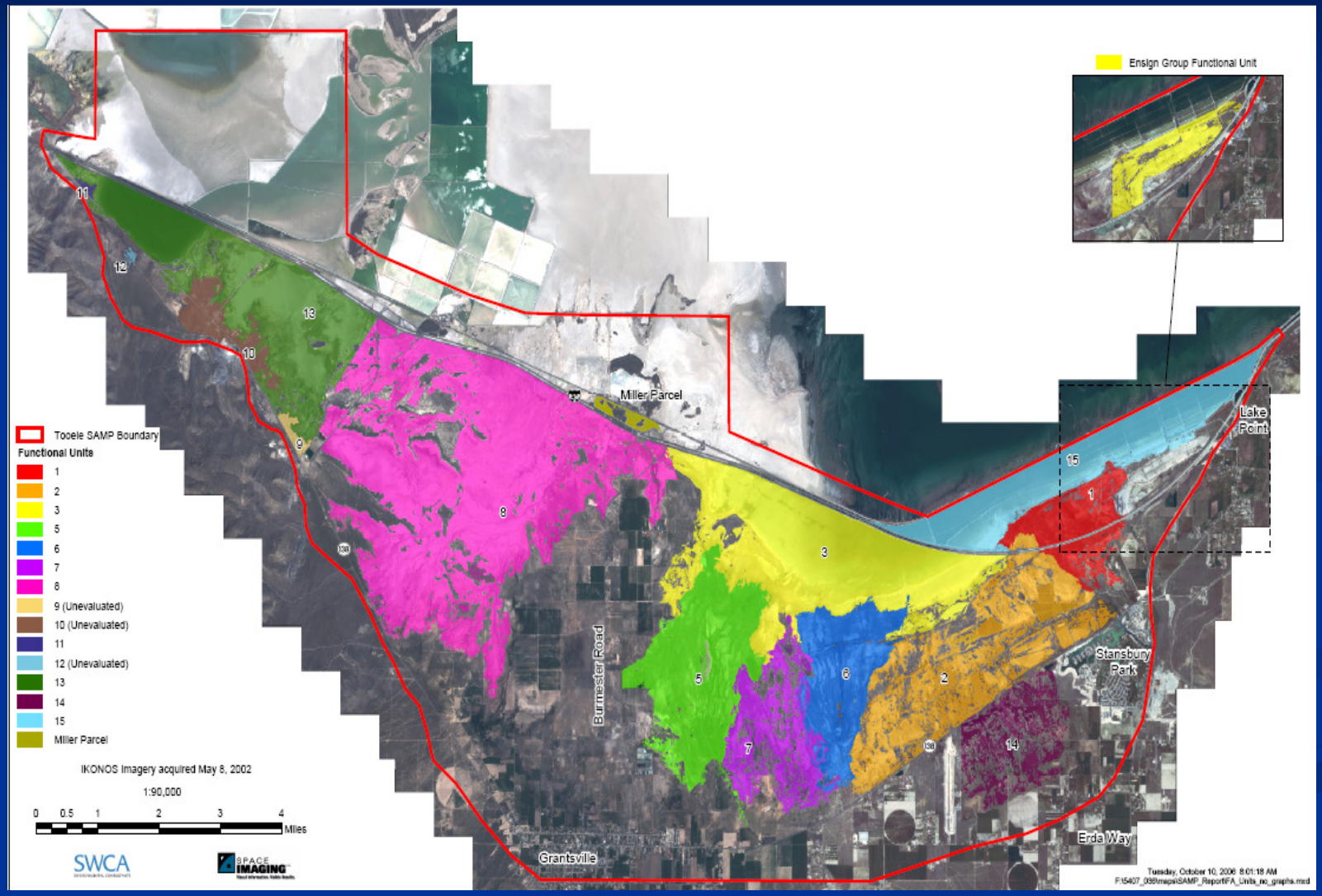
iv. Rating for depressional, mineral flat, and slope wetlands.

Cover (ii)	H			M			L		
Native Wetland Species (iii)	H	M	L	H	M	L	H	M	L
Rating	1H	.8H	.6M	.8H	.6M	.4M	.6M	.4M	.2L

Comments:

Wetland Assessment in a Watershed Context
Tooele County SAMP

Brian
Nicholson



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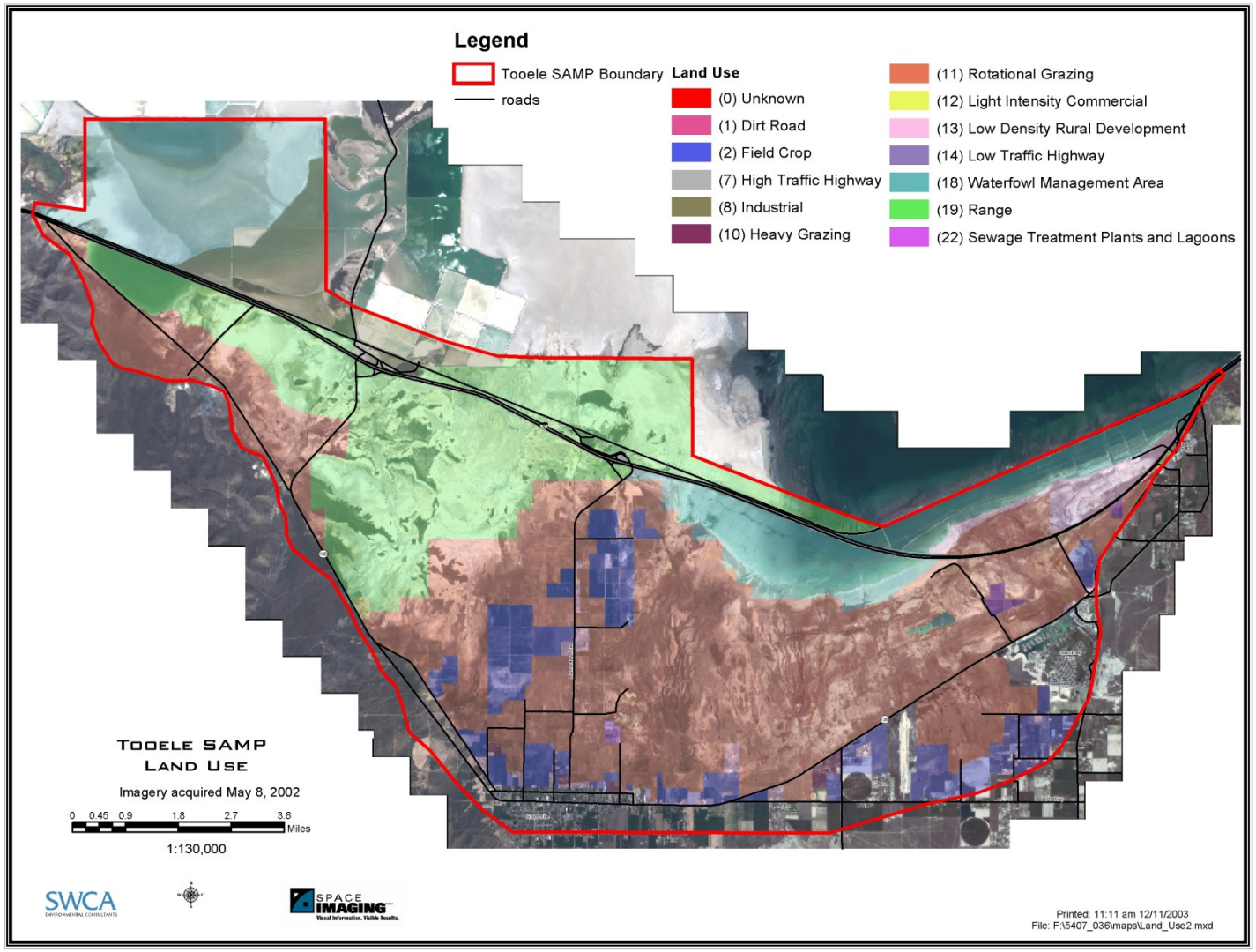


Heidi Hoven

Condition

LEVEL III Approach

- Monitoring: Change over time (eg. ISSR, LNP, Airport Mitigation)
- Farmington Bay Wetlands Study

Condition Metrics

Function

Wetland Functional Assessment

- SL County Shoreland SAMP (wetlands and wildlife habitat)

Wildlife Functional Assessment

URAM & Reference Network

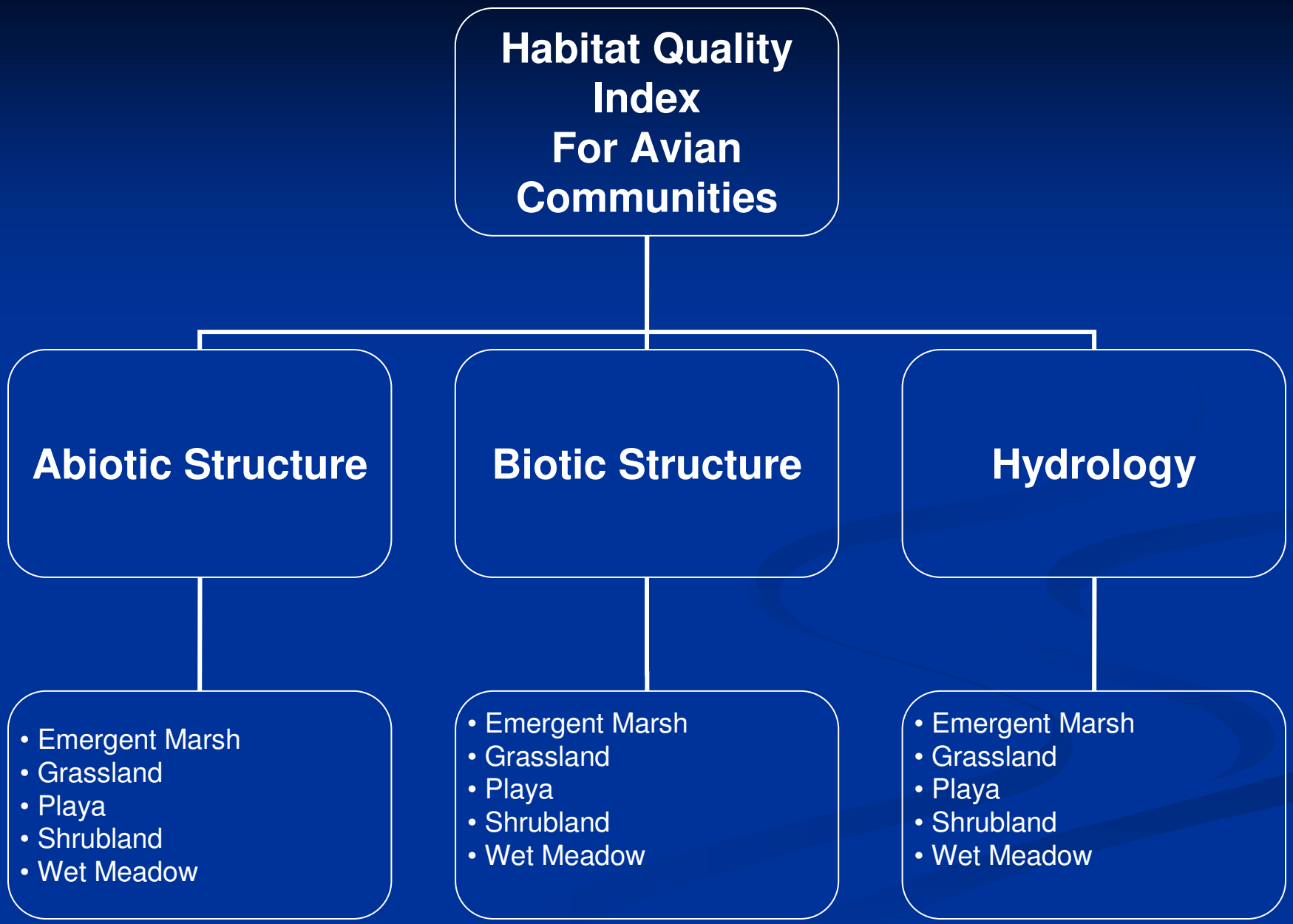
Other empirical data

Other wetland models

Assessment Objectives

- Assess pre- and post impact habitat conditions for wildlife
- Facilitate the process of developing compensatory mitigation ratios
- Monitor progress of restoration and mitigation efforts relative to baseline or reference conditions

Mike Sipos


Habitat Quality Index For Avian Communities
Abiotic Structure
Biotic Structure
Hydrology
• Emergent Marsh
• Grassland
• Playa
• Shrubland
• Wet Meadow
• Emergent Marsh
• Grassland
• Playa
• Shrubland
• Wet Meadow
• Emergent Marsh
• Grassland
• Playa
• Shrubland
• Wet Meadow